IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

ESTATE OF ROGER D. OWENSBY,	*	CASE NO. C-1-01-769
Plaintiff		(Judge S. Arthur Spiegel)
vs.	*	AFFIDAVIT OF NEIL F. FREUND
CITY OF CINCINNATI, et al.	*	
Defendant		

STATE OF OHIO)
) ss:
COUNTY OF MONTGOMERY)

Neil F. Freund, being first duly sworn, deposes and states as follows:

1. I am an adult of sound mind and body and have served as lead counsel in the above-captioned lawsuit.

2. On December 17, 2004, plaintiff's counsel Paul B. Martins attended the deposition cross-examination of Hamilton County Deputy Coroner Daniel L. Schultz, M.D. At that time, I cross-examined Dr. Schultz extensively regarding decedent's cause of death. Specifically, I questioned Dr. Schultz at length whether decedent could have experienced sudden cardiac death as a result of a cardiac arrhythmia, as opposed to mechanical asphyxiation.

3. The attached January 7, 2004 letter to opposing counsel Paul B. Martins identifying Defendants' expert witnesses was sent in the ordinary course of business on the date set forth.

4. The attached affidavit of Tom Neuman, M.D. was based on Dr. Neuman's expert report, which was received in the ordinary course of business on the date set forth. The expert reports of Dr. Neuman and Joseph Callanan were sent via facsimile on March 8, 2004 as well as by Federal Express on the same day, which additionally included the experts' curriculum vitae.

5. The expert report of Charles Wetli, M.D. was sent via facsimile on March 9, 2004 as well as by Federal Express on the same day, which additionally included the expert's

curriculum vitae. The attached affidavit of Dr. Wetli was filed in Case No. C-1-02-374, United States District Court, Southern District, Western Division, R. Blane Jorg v. City of Cincinnati, filed May 28, 2003 and became a matter of public record.

6. The undersigned also cross-examined Cyril Wecht, M.D. on sudden cardiac death on February 25, 2004.

FURTHER AFFIANT SAYETH NAUGHT

Neil F. Freund

Sworn to before me and subscribed in my presence this 14th day of April, 2004.

Notary Public
State of Ohio
My Commission Expires:

DEBERAH K. YAHLE, Notary Public
In and for the State of Ohio
My Commission Expires May 25, 2004

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

The Estate of Roger D. Owensby	:	**Case No. 1:01-cv-769**
Plaintiff,	:	**(Judge Spiegel)**
-vs-	:	
CITY OF CINCINNATI, et al.,	:	**CIVIL RULE 56(f) AFFIDAVIT OF TOM S. NEUMAN, M.D.**
Defendant.	:	

STATE OF OHIO }
} ss:
HAMILTON COUNTY, OHIO }

Now comes Affiant, Tom S. Neuman, M.D. and being duly sworn, deposes and states as follows:

1. My name is Tom S. Neuman. I am the Associate Director of the Emergency Department for the University of California, San Diego. I am Board Certified by the American Board of Medical Specialties in Emergency Medicine, Internal Medicine and Occupational Medicine. In addition, I hold sub-specialty certifications in Pulmonary Disease and Undersea and Hyperbaric Medicine.

2. My colleagues and I have done extensive research concerning the cardiopulmonary effects of various restraint procedures. I have had training in pulmonary physiology and data analysis, thus, I am qualified to both analyze and criticize the literature in this field.

3. I have been the Editor in Chief of a peer reviewed scientific journal further augmenting my experience in evaluating the quality and limitations of medical literature as well as the underlying scientific experiments associated with that literature.

4. I am a member of the San Diego County Coroner's Committee for the Investigation of Diving Fatalities and thus am familiar with the complexities associated with attempting to find a cause of death and/or

mechanism of death especially in situations where no specific anatomic findings are present to point to a definitive cause.

5. I am an author on a number of peer reviewed scientific papers that examine the physiologic effects of various restraint procedures.

6. For further details of my background and experience I refer you to my c.v. which is attached to this report and which is true and accurate to the best of my knowledge.

7. My opinions are based upon the following material:

1. Autopsy report of Mr. Owensby
2. Affidavit of Dr. Wetli
3. Report of Dr. Wecht
4. Deposition of Mr. Brazile
5. Deposition of Mr.Caton
6. Deposition of Mr. Hasse
7. Deposition of Mr. Hunter (I and II)
8 Deposition of Mr. Jorg
9. Deposition of Mr. Sellers
10. Deposition of Mr. Spellen
11. Deposition of Dr. Schultz (I and II)
12. Plaintiff's Motion for Summary Judgment (and supporting documents)
13. Deposition of Mr. Coburn

8. Understand that opinions are always based upon the information that is available. Should further information become available that materially alters the facts as I understand them, I must reserve the right to modify my opinions.

9. I have reviewed material concerning the death of Mr. Owensby and am able to provide an opinion by a reasonable degree of medical probability concerning what role, if any, the actions of the police officers involved in placing him in custody may have played in his death and whether CPR, if it had been given immediately upon the development of his cardiac arrest, would have resulted in a different outcome.

10. I am also now in a position to comment upon the deposition and opinions of Dr. Schultz.

11. Although there are a variety of things that happened in the sequence of events that ultimately culminated in Mr. Owensby's death, the most important of those facts are as follows:

1. An interaction between Mr. Owensby and the Cincinnati police took place on November 7, 2000
2. Mr. Owensby ran from the police
3. Mr. Owensby was tackled
4. At 1947 a call for assistance was made
5. A struggle between Mr. Owensby and the police ensued. An unknown amount of weight was placed upon him, some on his lower back, some on his buttocks, some on his upper back, and a knee on his shoulder blade.
6. At 1949 he was handcuffed and all weight was off his back

12. At this point there is a divergence in the testimony to the degree that I can no longer be reasonably sure as to the sequence of events. There are however two general scenarios that are described which I relate below.

1. Mr. Owensby was unconscious, head forward, not moving with his feet dragging when he was placed into the police vehicle, or

2. Mr. Owensby walked and/or lifted his legs off the ground and resisted being placed in the car.

Ultimately, after he had been placed in the police car, it was noticed that Mr. Owensby's appearance in the back of the police cruiser was not good. He was removed and found to be in cardiac arrest. Resuscitative efforts were unsuccessful.

13. In lay terms, asphyxia is basically death due to suffocation or death due to oxygen deprivation. When one is prevented from breathing, a predictable sequence of events takes place. The knowledge of the details of this sequence of events is based upon animal studies, our understanding of normal human physiology, observations of other pathologic conditions, and (not to be ignored) common sense. Perhaps most importantly, the process of asphyxiation takes a considerable period of time to occur and progresses in an easily understood fashion. The first organ system to demonstrate cessation of function is the brain. This is because the brain is the organ most sensitive to oxygen deprivation. The initial failure of function is manifested by loss of consciousness. If even a minimal amount of breathing can take place, the time to cessation of brain function will take longer. It must be emphasized that although the victim of suffocation loses

consciousness, the heart continues to beat. The heart continues to beat because it is less sensitive to oxygen deprivation than the brain and therefore it continues to function for a substantially longer period when faced with oxygen deprivation. Indeed, it will take several more minutes for the heart to stop beating in the setting of simple suffocation. In general, this whole process, from the initial complete cessation of breathing to death, will take a minimum of 5 minutes and that is only if the victim is unable to breathe at all. Should there be any breathing at all, the whole process will take considerably longer.

14. The reason these processes occur over a period of several minutes is well understood. Basically the body has significant oxygen stores to allow the organs to function even in the absence of breathing. If this were not the case you would not be able to hold your breath nor to swim a length of a pool underwater. These oxygen stores are most importantly the residual air in your lungs and the oxygen contained in your blood. (Your body only uses about 25% of the oxygen in your blood with each complete pass around the body).

15. Given the time logs (transcription of the radio logs) of the events, it is highly unlikely that Mr. Owensby died of mechanical asphyxiation. First of all, it defies logic to believe that in a struggle with several police officers that Mr. Owensby was not able to breathe at all. But even if he were not able to breathe at all, two minutes is simply not enough time to asphyxiate to death.

16. Dr. Schultz is correct in his deposition statements that it takes "minutes" to asphyxiate, but two minutes is simply insufficient.

17. In large series of drowning victims (which is a form of asphyxiation that should take less time than simple mechanical asphyxiation), it is estimated that it takes approximately 5 minutes for cardiac arrest to occur. In animal models of simple suffocation the time course is considerably longer. Regardless, two minutes is a time period that many individuals can hold their breath. It is simply too short a period to die of asphyxiation.

18. Two possible scenarios outlined above are as follows:

The first scenario is in keeping with Dr. Schultz' interpretation of the events (I underscore events, rather than his interpretation of the cause of death). If as Dr. Schultz has opined, Mr. Owensby was in fact dead before he was placed in the cruiser, he died during the two minute period of the struggle with the police. As this is an insufficient time to asphyxiate, one must seek an alternate cause of death. The only remaining possibility is that indeed Mr. Owensby did die of a sudden cardiac arrest. Given his

height of 5'7, a heart weight of 380 grams is certainly at the upper limit of normalcy if not frankly, abnormal. As an enlarged heart is a risk factor for sudden cardiac death, this remains the most likely diagnosis in this case.

19. The second scenario would indicate that Mr. Owensby was not only alive, but actively resisting being placed in the police cruiser after being handcuffed and arrested. This is in keeping with some of the testimony (but clearly at odds with other testimony) and is also in keeping with the examination of Mr. Owensby's boots which did not reveal any scuffing consistent with having been dragged. If this is the case, Mr. Owensby died while he was in the back of the police cruiser. In this regard Dr. Schultz is wrong. People do "simply die." Of course, they do not die from asphyxia in such circumstances, but rather again a sudden cardiac death is the most likely event given the autopsy results and the lack of any other plausible cause of death.

20. Finally, I address the issue of whether more prompt CPR would have resulted in Mr. Owensby's survival. This is an extremely easy question to answer from an epidemiological point of view. Not withstanding the expectations of the public, cardiac arrest is still a highly lethal event. Depending upon the exact paper one reads there are varying survival rates; however, with the exception of a few small series and other series in which only a selected subset of victims are examined, the general survival rate from cardiac arrest (i.e. discharge from the hospital neurologically intact), remains very poor. Thus regardless of whether CPR was given, it is more likely than not, to a reasonable degree of medical probability, that Mr. Owensby would have died.

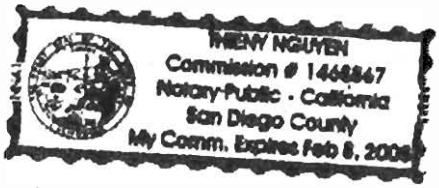
21. In summary then, my opinions, to a reasonable degree of medical probability, are that Mr. Owensby did not die of mechanical asphyxiation and that his death was due to a sudden (primary) cardiac arrhythmia. Furthermore, CPR, regardless of when it would had been instituted, would not, to a reasonable degree of medical probability, have made it more likely than not that he would have survived.

Further, Affiant sayeth naught.

Tom S. Neuman, M.D.

Sworn and subscribed in my presence this 25 day of februrary

_____, 2004.



Notary Public, State of California
My commission expires

Tom S. Neuman, M.D., FACP, FACPM
579 Amphitheater Drive
Del Mar, California 92014
858-755-0795

February 19, 2004

Ms. Geri Geiler
Ass't City Solicitor
Room 214, City Hall
801 Plum Street
Cincinnati, Ohio 45202

Dear Ms. Geiler

As you have requested, I have reviewed the material you forwarded to me concerning the death of Mr. Owensby. I am now ready to advise you concerning what role, if any, the actions of the police officers involved in placing him in custody may have played in his death and whether CPR, if it had been given immediately upon the development of his cardiac arrest, would have resulted in a different outcome. I am also now in a position to comment upon the deposition and opinions of Dr. Schultz.

I am confident in my ability to offer qualified opinions in these matters. I am the Associate Director of Emergency Medical Services for the University of California, San Diego. I am Board Certified by the American Board of Medical Specialties in Emergency Medicine, Internal Medicine and Occupational Medicine. In addition, I hold sub-specialty certifications in Pulmonary Disease and Undersea and Hyperbaric Medicine. My colleagues and I have done extensive research concerning the cardiopulmonary effects of various restraint procedures .Furthermore, I have had training in pulmonary physiology and data analysis, thus, I am qualified to both analyze and criticize the literature in this field. I have been the Editor in Chief of a peer reviewed scientific journal further augmenting my experience in evaluating the quality and limitations of medical literature as well as the underlying scientific experiments associated with that literature. I am a member of the San Diego County Coroner's Committee for the Investigation of Diving Fatalities and thus am familiar with the complexities associated with attempting to find a cause of death and/or mechanism of death especially in situations where no specific anatomic findings are present to point to a definitive cause. Finally, I am an author on a number of peer reviewed scientific papers that re-examines the findings of pathologists for research purposes. Thus I have considerable experience interpreting the findings made by pathologists at autopsy. For further details of my background and experience I refer you to my c.v. which is attached to this report.

My opinions are based upon the material you have sent me. That material consisted of the:

1. Autopsy report of Mr. Owensby
2. Affidavit of Dr. Wetli
3. Report of Dr. Wecht

4. Deposition of Mr. Brazile
5. Deposition of Mr.Caton
6. Deposition of Mr. Hasse
7. Deposition of Mr. Hunter (I and II)
8 Deposition of Mr. Jorg
9. Deposition of Mr. Sellers
10. Deposition of Mr. Spellen
11. Deposition of Dr. Schultz (I and II)
12. Plaintiff's Motion for Summary Judgment (and supporting documents)
13. Deposition of Mr. Coburn

Please understand that opinions are always based upon the information that is available. Should further information become available that materially alters the facts as I understand them, I must reserve the right to modify my opinions.

Although there are a variety of things that happened in the sequence of events that ultimately culminated in Mr. Owensby's death, the most important of those facts are as follows:

1. An interaction between Mr. Owensby and the Cincinnati police took place on November 7, 2000
2. Mr. Owensby ran from the police
3. Mr. Owensby was tackled
4. At 1947 a call for assistance was made
5. A struggle between Mr. Owensby and the police ensued. An unknown amount of weight was placed upon him, some on his lower back, some on his buttocks, some on his upper back, and a knee on his shoulder blade.
6. At 1949 he was handcuffed and all weight was off his back

At this point there is a divergence in the testimony to the degree that I can no longer be reasonably sure as to the sequence of events. There are however two general scenarios that are described which I relate below.

1. Mr. Owensby was unconscious, head forward, not moving with his feet dragging when he was placed into the police vehicle, or
2. Mr. Owensby walked and/or lifted his legs off the ground and resisted being placed in the car.

Ultimately, after he had been placed in the police car, it was noticed that Mr. Owensby's appearance in the back of the police cruiser was not good. He was removed and found to be in cardiac arrest. Resuscitative efforts were unsuccessful.

Before analyzing these two different scenarios it is worthwhile to understand the physiology of asphyxia, the sequence of events and the time course associated with asphyxia.

In lay terms, asphyxia is basically death due to suffocation or death due to oxygen deprivation. When one is prevented from breathing, a predictable sequence of events takes place. The knowledge of the details of this sequence of events is based upon animal studies, our understanding of normal human physiology, observations of other pathologic conditions, and (not to be ignored) common sense. Perhaps most importantly, the process of

asphyxiation takes a considerable period of time to occur and progresses in an easily understood fashion. The first organ system to demonstrate cessation of function is the brain. This is because the brain is the organ most sensitive to oxygen deprivation. The initial failure of function is manifested by loss of consciousness. This is a process, which takes several minutes at a minimum (I underscore "minimum" because this will take several minutes if breathing is completely arrested. If even a minimal amount of breathing can take place, the time to cessation of brain function will take even longer). It must be emphasized that although the victim of suffocation loses consciousness, the heart continues to beat. The heart continues to beat because it is less sensitive to oxygen deprivation than the brain and therefore it continues to function for a substantially longer period when faced with oxygen deprivation. Indeed, it will take several more minutes for the heart to stop beating in the setting of simple suffocation. In general, this whole process, from the initial complete cessation of breathing to death, will take a minimum of 5 minutes and that is only if the victim is unable to breathe at all. Should there be any breathing at all, the whole process will take considerably longer.

The reason these processes occur over a period of several minutes is well understood. Basically the body has significant oxygen stores to allow the organs to function even in the absence of breathing. If this were not the case you would not be able to hold your breath nor to swim a length of a pool underwater. These oxygen stores are most importantly the residual air in your lungs and the oxygen contained in your blood. (Your body only uses about 25% of the oxygen in your blood with each complete pass around the body).
Given the time logs (transcription of the radio logs) of the events, it is highly unlikely that Mr. Owensby died of mechanical asphyxiation. First of all, it defies logic to believe that in a struggle with sevseral police officers that Mr. Owensby was not able to breathe at all. But even if he were not able to breathe at all, two minutes is simply not enough time to asphyxiate to death. Dr. Schultz is correct in his deposition statements that it takes "minutes" to asphyxiate, but two minutes is simply insufficient. In large series of drowning victims (which is a form of asphyxiation that should take less time than simple mechanical asphyxiation), it is estimated that it takes approximately 5 minutes for cardiac arrest to occur. In animal models of simple suffocation the time course is considerably longer. Regardless two minutes is a time period that many individuals can hold their breath. It is simply too short a period to die of asphyxiation.

It now becomes worthwhile to examine the two possible scenarios outlined above.

The first scenario is in keeping with Dr. Schultz' interpretation of the events (I underscore events, rather than his interpretation of the cause of death). If as Dr. Schultz has opined, Mr. Owensby was in fact dead before he was placed in the cruiser, he died during the two minute period of the struggle with the police. As this is an insufficient time to asphyxiate, one must seek an alternate cause of death. The only remaining possibility is that indeed Mr. Owensby did die of a sudden cardiac arrest. Given his height of 5'7, a heart weight of 380 grams is certainly at the upper limit of normalcy if not frankly abnormal. As an enlarged heart is a risk factor for sudden cardiac death, this remains the most likely diagnosis in this case.

The second scenario would indicate that Mr. Owensby was not only alive, but actively resisting being placed in the police cruiser after being handcuffed and arrested. This is in keeping with some of the testimony (but clearly at odds with other testimony) and is also in

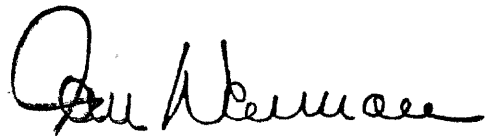
keeping with the examination of Mr. Owensby's boots which did not reveal any scuffing consistent with having been dragged. If this is the case, Mr. Owensby died while he was in the back of the police cruiser. In this regard Dr. Schultz is wrong. People do "simply die." Of course, they do not die from asphyxia in such circumstances, but rather again a sudden cardiac death is the most likely event given the autopsy results and the lack of any other plausible cause of death.

Finally, you have asked me to address the issue of whether more prompt CPR would have, resulted in Mr. Owensby's survival. This is an extremely easy question to answer from an epidemiological point of view. Not withstanding the expectations of the public, cardiac arrest is still a highly lethal event. Depending upon the exact paper one reads there are varying survival rates, however with the exception of a few small series and other series in which only a selected subset of victims are examined, the general survival rate from cardiac arrest (i.e. discharge from the hospital neurologically intact), remains under very poor. Thus regardless of whether CPR was given, it is more likely than not, to a reasonable degree of medical probability, that Mr. Owensby would have died.

In summary then, my opinions to a reasonable degree of medical probability are that Mr. Owensby did not die of mechanical asphyxiation and that his death was due to a sudden (primary) cardiac arrhythmia. Furthermore, CPR regardless of when it would had been instituted, would not, to a reasonable degree of medical probability have made it more likely than not that he would have survived.

Thank you for asking me to analyze this case. If there is anything further I can do to be of assistance please do not hesitate to contact me.

Very truly yours,



Tom S. Neuman, MD, FACP, FACPM
Professor of Medicine and Surgery
University of California, San Diego

TOM S. NEUMAN, M.D., FACP, FACPM

HOME ADDRESS:

579 Amphitheater Drive
Del Mar, CA 92014
Phone: (858) 755-0795
Fax #: (858) 755-6457

OFFICE ADDRESS:

Department of Emergency Medicine
UCSD Medical Center
200 W. Arbor Drive
San Diego, CA 92103-8676
Phone: (619) 543-6218
Fax #: (619) 543-3115
E-mail: tneuman@ucsd.edu

PERSONAL: Born July 23, 1946 in New York City, New York
Family Data: Married to former Doris L. Rubin, B.S. (Long Island University), M.S. (Brooklyn College)
Daughter: Allison Rachel Neuman, born 6-22-80
Son: Russell Solomon Neuman, born 9-12-86

EDUCATION:

Academic: 1963-67	A.B., Cornell University Ithaca, New York
Medical School: 1967-71	M.D., New York University School of Medicine New York, New York
Internship: 1971-72	Straight Medical Internship Bellevue Hospital, New York, New York
Residency: 1972-73	Internal Medicine Residency Bellevue Hospital, New York, New York
Fellowship: 1976-78	Pulmonary Medicine and Physiology University of California, San Diego Medical Center University and Affiliated Hospitals

BOARD RECOGNITION:

Diplomat, National Board of Medical Examiners, Certified, 1972

American Board of Internal Medicine - Certified in Internal Medicine, 1977

American Board of Internal Medicine - Certified in Pulmonary Disease, 1978

American Board of Preventive Medicine - Certified in Occupational Medicine, 1980

American Board of Emergency Medicine - Certified in Emergency Medicine, 1986 (Recertified 1996)

American Board of Preventive Medicine - Certified in Undersea and Hyperbaric Medicine, 2000

AWARDS AND SCHOLARSHIPS:

Regents Scholarship, Cornell University, 1964-67

Admissions Scholarship, New York University School of Medicine, 1967-71

Lang Award, 1969 (Outstanding Student)

NATIONAL HONORS:

Vice President, Undersea Medical Society, 1983-84

Secretary, American College of Undersea and Hyperbaric Medicine, 1985-90

President, Undersea and Hyperbaric Medical Society, 1989-90

Board of Governors, American College of Undersea and Hyperbaric Medicine, 1985-96

President, American College of Undersea and Hyperbaric Medicine, 1990-96

National Academy of Sciences, Institute of Medicine, Committee on Creating a Vision of Space Medicine Beyond Earth Orbit; the Colonization of the Moon and the Mars Expedition, October 1999-2001

National Academy of Sciences, Institute of Medicine, Standing Committee on Aerospace Medicine and the Medicine of Extreme Environments, which supports the IOM Health Sciences Policy Board, 2001-present

National Academy of Sciences, Institute of Medicine, Committee on the Longitudinal Study of Astronaut Health, 2002-present

Consumer's Research Council of America, Listed in "Guide to America's Top Physicians" (only 3,000 from all 50 states & Puerto Rico) Publication, 2003 Edition.

APPOINTMENTS:

1996 - Present	Professor of Clinical Medicine, University of California, San Diego (UCSD) School of Medicine
1990 - Present	Adjunct Professor of Surgery, UCSD School of Medicine
1994 - Present	Associate Director, Department of Emergency Medicine, UCSD Medical Center
1984 - Present	Director, Hyperbaric Medicine Center, UCSD Medical Center
1984 - Present	Base Hospital Physician, UCSD Medical Center
1990 - 1996	Adjunct Professor of Medicine, UCSD School of Medicine

PREVIOUS EXPERIENCE:

1987-90	Associate Adjunct Professor of Medicine and Surgery, UCSD School of Medicine
1984-87	Associate Clinical Professor of Medicine and Surgery, UCSD School of Medicine
1982-85	Member, Medical Advisory Board of the Western Regional Underwater Laboratory Program, University of Southern California Marine Science Center, Catalina, CA
1980-98	Attending Physician, Pulmonary Division (Clinical Consultation and Pulmonary Function Testing Laboratory), UCSD Medical Center
1980-84	Assistant Director, Department of Emergency Medicine, UCSD Medical Center
1980-86	Flight Physician, Life Flight Air Medical Program, UCSD Medical Center
1980-84	Assistant Clinical Professor of Medicine, UCSD School of Medicine
1978-80	Clinical Instructor, UCSD School of Medicine
1976-78	Attending Physician, Veterans Administration Medical Center, La Jolla, California
1975-80	Emergency Room Physician, Chula Vista Community Hospital, Chula Vista, California
1972-73	Teaching Assistant, New York University School of Medicine

GOVERNMENTAL APPOINTMENTS:

Member, San Diego Coroner's Committee for Investigation of Diving Fatalities, 1974-present

Medical Diving Consultant, Vocational Diver Training Facility, California Institution for Men, Chino, California, 1987-92

Member, City Manager's Task Force on Carbon Monoxide Poisoning, San Diego, California, 1991-92

NASA Consultant, 2000- present

OCCUPATIONAL/DIVING EDUCATION AND EXPERIENCE:

Naval School of Submarine Medicine, New London, CT, 1973

Naval School of Diving and Salvage, Washington, DC, 1973

Naval Nuclear Power Training Unit, West Milton, NY, 1973

Naval School of Deep Diving Systems, San Diego, CA, 1974

Naval Submarine Medical Officer; Qualified 1974

Naval Undersea Medical Officer; Qualified 1975

Naval Saturation Qualified Medical Officer, 1975

OCCUPATIONAL/DIVING EDUCATION AND EXPERIENCE (continued):

CMAS (Confederation Mondiale des Activities Subaquatiques) Instructor Second Degree, 1978-82

PADI Scuba Instructor Emeritus

MILITARY EXPERIENCE:

7/73 - 12/73	Submarine Medical Officer Candidate
12/73 - 6/74	Instructor, Naval Undersea Medical Institute, New London, Connecticut
6/74 - 6/76 & 7/78 - 6/80	Staff Medical Officer, Submarine Development Group One, San Diego, California
7/80 - 8/84	Medical Officer, UDT/SEAL Reserve Unit 119, San Diego, California
9/84 - 8/86	Medical Officer, Mobile Diving and Salvage Unit One, U.S. Naval Reserves, San Diego, California
9/86 - 12/87	Senior Medical Officer, Seal Teams 1/3/5, U.S. Naval Reserves, Coronado, California
1/88 - 9/90	Medical Officer, PRIMUS Unit 1942–A, University of California, San Diego School of Medicine
10/90 - 1/95	Assistant Officer in Charge, Medical Unit 1942-A, University of California, San Diego School of Medicine
2/95 - 4/96	Medical Officer, PRIMUS Unit 1942-A, University of California, San Diego School of Medicine
4/96 - Present	Member of Fleet Reserve (Rank of Captain)

LICENSURE:

California Medical License Number G-27796, 1974

CERTIFICATION:

Cardiopulmonary Resuscitation Provider, 1980-present

Advanced Trauma Life Support Instructor, 1980-85

Advanced Trauma Life Support Provider, 1985-2001

Advanced Cardiac Life Support Instructor, 1981-97

MISCELLANEOUS:

Advanced Cardiac Life Support Affiliate Faculty, 1982-93

Advanced Cardiac Life Support Provider, 1997-present

Editor-in-Chief, *Undersea & Hyperbaric Medicine,* 1995-2002

Editorial Board, *Undersea & Hyperbaric Medicine,* 1993-95

Reviewer for: Undersea and Hyperbaric Medicine, Journal of Applied Physiology, Physics in Medicine, Chest, Annals of Emergency Medicine, Journal of Emergency Medicine, European Journal of Applied Physiology, Aviation Space and Environmental Medicine

Included in Marquis' "Who's Who in American Education", 1993-present, "Who's Who in America", 1994-present and "Who's Who in Medicine & Healthcare", 1997-present

Member, National Disaster Medical Assistance Team (DMAT), San Diego (Unit of CA-4), 6/92-present

Liaison from the American Board of Emergency Medicine to the American Board of Preventive Medicine for the Specialty Examination of Undersea and Hyperbaric Medicine, 2000-present

Inaugural Member, Academy of Clinical Scholars, UCSD School of Medicine, 2002

Member Safety Review Board, University of Southern California Marine Science Center, Catalina Hyperbaric Chamber, 2003-present

CURRENT PROFESSIONAL SOCIETY AND COMMITTEE MEMBERSHIPS:

Fellow, American College of Physicians

Fellow, American College of Preventive Medicine

American Thoracic Society

American Lung Association

Undersea and Hyperbaric Medical Society

North Pacific Chapter, Undersea and Hyperbaric Medical Society

Professional Association of Diving Instructors (Emeritus)

South Pacific Undersea Medical Society

American Board of Preventive Medicine, Undersea and Hyperbaric Medicine Board

Examination Committee

University of California San Diego, Academy of Clinical Scholars, Membership Committee

PREVIOUS ACTIVITIES:

Pharmacy and Therapeutics Committee, UCSD Medical Center, 1980-82, 1988-92

Environmental Health Task Force, San Diego County Lung Association, 1981-82

Employee Health Services Committee, UCSD Medical Center, 1981-90

Program Committee, Undersea Medical Society, 1981-82

Nominations Committee, Undersea Medical Society, 1982-83

Education Committee, Undersea Medical Society, 1982-87

Awards Committee (Chairman), Undersea Medical Society, 1983-84

Executive Committee (Vice-President), Undersea Medical Society, 1983-84

Recruitment and Admissions Committee, UCSD School of Medicine, 1983-84

Credentials Committee (Co-Chairman), Undersea Medical Society, 1984-85

Medical Ethics Committee, UCSD School of Medicine, 1986-88

Core Curriculum Committee, UCSD School of Medicine, 1986-88

Nominations Committee (Chairman), Undersea and Hyperbaric Medical Society, 1988-89

Executive Committee, Undersea Medical Society, 1988-92

Liaison, American College of Emergency Medicine/American College of Undersea and Hyperbaric Medicine, 1988-94

Fellow, American College of Emergency Medicine, 1991-94

Chairman, Emergency Medicine Physician Quality Improvement Committee, 1992-94

Patient Care Review Committee, UCSD Medical Center, 1992-94

American National Standards Institute Committee for Minimal Course Content for Recreational Scuba Instructor Certification, 1992-99

American Diabetes Association Committee on Exercise; Subcommittee on Scuba Diving and Diabetes, 1994-96

Department of Medicine Committee on Appointments and Promotions, UCSD School of Medicine, 1997-2001

Board of Advisors, Grauer School, 2000-01

PUBLICATIONS:

Articles

1. Neuman TS: Submarine escape training in the U.S. Navy: A reevaluation. Naval Undersea Medical Institute, 1974.

2. Neuman TS, Settle H, Beaver G, Linaweaver P: Maxillary sinus barotrauma with cranial nerve involvement. Aviat Space Environ Med 1975;46(3):314-315.

3. Neuman TS, Hall D, Linaweaver PG: Gas phase separation during decompression in man: Ultrasound monitoring. Undersea Biomed Res 1976;3(2):121-130.

4. Neuman TS, Harris M, Linaweaver PG: Hematologic changes in man during decompression: Relations to overt decompression sickness and bubble scores. Aviat Space Environ Med 1976;47:803-807.

5. Goad RF, Neuman TS, Linaweaver PG: Hematologic changes in man during decompression: Relations to overt decompression sickness and bubble scores. Aviat Space Environ Med 1976;47(8):863-867.

6. Goad RF, Neuman TS: Decompression sickness: State of the art 1977. Marine Technology Society Journal 1977;11(4):8-12.

7. D'Aoust BG, Smith KH, Swanson HT, Harvey CA, Hunter WL, Neuman TS, Goad RF: Venous gas bubbles: Production by transient deep isobaric counter diffusion of helium against nitrogen. Science 1977;197:889-891.

8. Biersner R, Hall D, Neuman T, Linaweaver P: Learning rate equivalency of two narcotic gases. J Appl Psychol 1977;62(6):747-750.

9. Bierner R, Hall D, Linaweaver P, Neuman T: Diving experience and emotional factors related to psychomotor effects of nitrogen narcosis. Aviat Space Environ Med 1978;49(8):959.

10. Neuman TS, Goad RF, Hall D, Smith R, Claybaugh J, Hong S: Urinary excretion of water and electrolytes during open sea saturation diving to 850 FSW. Undersea Biomed Res 1979;6(3): 291-302.

11. Neuman TS, Spragg RG, Wagner PD, Moser KM: Cardiopulmonary consequences of decompression stress. Respir Physiol 1980;41:143-153.

12. Neuman TS, Bockman MA, Moody P, Dunford JV, Griffith LD, Guber SL, Guss DA, Baxt WG: An autopsy study of traumatic deaths: San Diego County - 1979. Am J Surg 1982;144(6): 722-727.

13. Guidotti TL, Cortez JH, Abraham HL, Hughson W, Krems AD, Neuman TS, Bryson AL, Heramb BI: Taking the occupational history. Ann Intern Med 1983;99(5):641-651.

PUBLICATIONS (continued):

Articles (continued)

14. Guss DA, Dunford JV, Griffith LD, Neuman TS, Baxt WG, Winger B, Guber SL: Clean-catch versus straight-catheter urinalysis results in women. Am J Emerg Med 1985; 3(4):369-371.

15. Manoguerra AS, Neuman TS: Fatal acute poisoning from hydrofluoric acid ingestion. Am J Emerg Med 1986;4(4):362-363.

16. Neuman TS, Hallenbeck JM: Barotraumatic cerebral air embolism and the mental status examination: A report of four cases. Ann Emerg Med 1987;16(2):220-223.

17. Guss DA, Meyer FT, Neuman TS, Baxt WG, Dunford JV, Griffith LD, Guber SL: The impact of a regionalized trauma system on trauma care in San Diego County. Ann Emerg Med 1989; 18(11):1141-1145.

18. Gadd MA, McClellan DS, Neuman TS, Hansbrough JF: Effect of hyperbaric oxygen on murine neutrophil and T-lymphocyte functions. Crit Care Med 1990;18(9):974-979.

19. Neuman TS, Bove AA: Combined arterial gas embolism and decompression sickness following no-stop dives. Undersea Biomed Res 1990;17(5):429-436.

20. Harker CP, Neuman TS, Olson LK, Jacoby I, Santos A: The roentgenographic findings associated with air embolism in sport scuba divers. J Emerg Med 1993;11(4):443-449.

21. Smith RM, Neuman TS: Elevation of serum creatine kinase in divers with arterial gas embolization. New Engl J Med 1994;330(1):19-24.

22. Smith RM, Van Hoesen KB, Neuman TS: Arterial gas embolism and hemoconcentration. J Emerg Med 1994;12(2):147-153.

23. Hebel GA, Hutton K, Kanowitz A, Neuman TS, Martinson L, Rosen P: The accuracy of ST segment deviation in prehospital cardiac monitoring. J Emerg Med 1994;12(2):207-211.

24. Neuman TS, Bove AA, O'Connor RD, Kelsen SG: Asthma and diving. Annals of Allergy 1994;73:344-350.

25. Tenenhaus M, Hansbrough JF, Zapata-Sirvent R, Neuman TS: Treatment of burned mice with hyperbaric oxygen reduces mesenteric bacteria but not pulmonary neutrophil deposition. Arch Surg 1994;129:1338-1342.

26. Smith RM, Neuman TS: Abnormal serum biochemistries in association with arterial gas embolism. J Emerg Med 1997;15(3):285-289.

27. Kimbro TM, Tom TW, Neuman TS: A case of spinal cord DCS presenting as Brown-Sequard syndrome. Neurology May 1997; 48:1454-1456.

PUBLICATIONS (continued):

Articles (continued)

28. Chan TC, Vilke GM, Neuman TS, Clausen JL: Custody restraint position and positional asphyxia. Ann Emerg Med 1997;30(5):578-586.

29. Neuman TS, Jacoby I, Bove AA: Fatal pulmonary barotrauma due to obstruction of the central circulation with air. J Emerg Med 1998;16(3):413-417.

30. Howard JD, Reay DT [32(1):116-117] / Chan TC, Vilke GM, Neuman T, Clausen J: Positional asphyxia (Reply to letter to the editor). Ann Emerg Med 1998;32(1):117-118.

31. Neuman TS, Clausen JL: Recommend caution in defining risk factors for barotrauma in divers (Letter to the editor). Chest 1998;114(6):1791-1792.

32. Chan TC, Neuman T, Vilke GM, Clausen J, Clark RF: Metabolic acidosis in restraint-associated cardiac arrest (Letter to the editor). Acad Emerg Med 1999;6(10):1075-1076.

33. Reay DT, Howard JD [20(3):300-301] / Chan TC, Vilke GM, Neuman T: Restraint position and positional asphyxia (Reply to letter to the editor). Am J Forensic Med Pathol 2000; 21(1):93.

34. Vilke GM, Chan TC, Neuman T, Clausen JL: Spirometry in normal subjects in sitting, prone, and supine positions. Respir Care 2000;45(4):407-410.

35. Chan TC, Vilke GM, Clausen J, Clark RF, Schmidt P, Snowden T, Neuman T: Impact of oleoresin capsicum spray on respiratory function in human subjects in the sitting and prone maximal restraint positions (Final Report). NCJ 182433. Washington, DC: United States Department of Justice, National Institute of Justice, 2000, 68 pages.

36. Chan TC, Vilke GM, Clausen J, Clark RF, Schmidt P, Snowden T, Neuman T: The effect of oleoresin capsicum "pepper" spray inhalation on respiratory function. J Forensic Sci 2002; 47(2):28-33.

Invited Review Articles

1. Neuman TS: Diving medicine. Clinics in Sports Medicine 1987;6(3):647-661.

2. Guss DA, Neuman TS: Carbon monoxide poisoning: How to detect - and what to do. J Respir Dis 1990;11(9):773-786.

3. Kizer KW, Neuman TS: Meeting the challenge of scuba diving emergencies: Recognition, resuscitation, and recompression. Emergency Medicine Reports 1991;12(17):151-160.

4. Simmons CW, Neuman TS: Near-drowning: What to look for, how to treat. J Respir Dis 1992;13(8):1084-1094.

PUBLICATIONS (continued):

Invited Review Articles (continued)

5. Neuman TS: Dysbaric emergencies in scuba divers. Portion of article titled "Hook, fin, scuba, skin: Aquatic emergencies." Patient Care 1994;28(13):79-86.

6. Van Hoesen KB, Neuman TS: Asthma and diving. Immunol Allergy Clinics of N Am 1996;16(4):917-928.

7. Chan TC, Vilke G, Neuman T: Reexamination of custody restraint position and positional asphyxia. Am J Forensic Med Pathol 1998;19(3):201-205.

8. Chan TC, Vilke GM, Clausen J, Clark R, Schmidt P, Snowden T, Neuman T: Pepper spray's effects on a suspect's ability to breathe. Research in Brief (NCJ 188069), December 2001. Washington, DC: United States Department of Justice, National Institute of Justice.

9. Neuman TS: Arterial gas embolism and decompression sickness. News Physiol Sci 2002; 17:77-81.

Books

1. The Physiology and Medicine of Diving (fifth edition). Neuman and Brubakk (Eds.); London: WB Saunders, 2003.

2. Investigating Recreational and Commercial Diving Accidents. Barsky SM and Neuman TS; Ventura, California: Hammerhead Press, 2003.

Book Chapters

1. Neuman TS: Exercise. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references. Bordow, Stool, Moser and Conrique (Eds.); Boston: Little, Brown and Company, 1980, pp 18-21.

2. Neuman TS: Pulmonary Oxygen Toxicity. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references. Bordow, Stool, Moser and Conrique (Eds.); Boston: Little, Brown and Company, 1980, pp 362-365.

3. Neuman TS: Near Drowning, Diving and Decompression. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references. Bordow, Stool, Moser and Conrique (Eds.); Boston: Little, Brown and Company, 1980, pp 374-377.

4. Neuman TS: Near Drowning. In: Respiratory Emergencies (second edition). Moser and Spragg (Eds.); St. Louis, Missouri: C.V. Mosby, 1982, pp 281-284.

5. Neuman TS: Unusual Forms of Trauma. In: Trauma: The First Hour. Baxt (Ed.); Norwalk, Connecticut: Appleton-Century-Crofts, 1985, pp 267-291.

PUBLICATIONS (continued):

Book Chapters (continued)

6. Neuman TS: Near Drowning, Diving and Decompression. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references (second edition). Bordow and Moser (Eds.); Boston: Little, Brown and Company, 1985, pp 336-339.

7. Neuman TS (contributing author). In: The Encyclopedia of Recreational Diving. Hornsby and Shreeves (Eds.); Santa Ana, California: International PADI, Inc., 1988.

8. Neuman TS: Near Drowning. In: Diving Medicine (second edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 1990, pp 105-114.

9. Neuman TS: Pulmonary Disorders in Diving. In: Diving Medicine (second edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 1990, pp 233-238.

10. Neuman TS: Near Drowning and Diving Accidents. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references (third edition). Bordow and Moser (Eds.); Boston: Little, Brown and Company, 1991, pp 374-377.

11. Neuman TS: Near Drowning and Diving Accidents. In: Textbook of Pulmonary Diseases, Volume II (fifth edition). Baum and Wolinsky (Eds.); Boston: Little, Brown and Company, 1993, pp 1139-1159.

12. Neuman TS: Near Drowning and Diving Accidents. In: Manual of Clinical Problems in Pulmonary Medicine, with annotated key references (fourth edition). Bordow and Moser (Eds.); Boston: Little, Brown and Company, 1995, pp 385-388.

13. Neuman TS: Pulmonary Barotrauma. In: Diving Medicine (third edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 1997, pp 176-183.

14. Neuman TS: Near Drowning. In: Diving Medicine (third edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 1997, pp 217-226.

15. Neuman TS: Pulmonary Disorders in Diving. In: Diving Medicine (third edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 1997, pp 270-277.

16. Bove AA, Neuman TS: Diving-related Illnesses. In: Manual of Sports Medicine. Safran, McKeag and Van Camp (Eds.); Philadelphia: Lippincott-Raven, 1998, pp 114-118.

17. Neuman TS: Pulmonary Fitness for Diving. In: The Lung at Depth (first edition); Lung Biology in Health and Disease, Volume 132. Lundgren and Miller (Eds.); Madison, New York: Marcel Dekker, Inc., 1999, pp 73-90.

18. Bove AA, Neuman T: Diving Medicine. In: Textbook of Respiratory Medicine (third edition). Murray, Nadel, Mason and Boushey (Eds.); Philadelphia: W.B. Saunders Company, 2000, pp 1951-1969.

PUBLICATIONS (continued):

Book Chapters (continued)

19. Neuman TS: Near-Drowning and Diving Accidents. In: Manual of Clinical Problems in Pulmonary Medicine (fifth edition). Bordow, Ries and Morris (Eds.); Philadelphia: Lippincott Williams & Wilkins, 2001, pp 441-447.

20. Neuman TS: Pulmonary Barotrauma. In: Diving Medicine (fourth edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 2003, pp 185-194.

21. Neuman TS: Near Drowning. In: Diving Medicine (fourth edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 2003, pp 275-286.

22. Neuman TS: Pulmonary Disorders in Diving. In: Diving Medicine (fourth edition). Bove and Davis (Eds.); Philadelphia: W.B. Saunders Company, 2003, pp 475-484.

23. Neuman TS: Arterial Gas Embolism and Pulmonary Barotrauma. In: The Physiology and Medicine of Diving (fifth edition). Neuman and Brubakk (Eds.); London: W.B. Saunders, 2003, pp 557-577.

24. Jones JP, Neuman TS: Dysbaric Osteonecrosis. In: The Physiology and Medicine of Diving (fifth edition). Neuman and Brubakk (Eds.); London: W.B. Saunders, 2003, pp 659-717.

25. Snyder BS, Neuman TS: Dysbarism and Complications of Diving. In: Emergency Medicine. Tintenalli (Ed); New York City: McGraw-Hill, 2003, pp 1213-1217.

26. Bove AA, Neuman T: Diving Medicine. In: Textbook of Respiratory Medicine (fourth edition). Murray, Nadel, Mason and Boushey (Eds.); Philadelphia: W.B. Saunders Company, 2004, publication pending.

Abstracts

1. Neuman TS, Goad R, Linaweaver P: Changes in hematological parameters following dives to 210 FSW and 132 FSW and their correlation with bubble score. Undersea Biomed Res 1976; 3(1):A37-38.

2. Neuman TS, Spragg R, Goad R, Harvey C, Howard R, Moser K: The effect of decompression and asymptomatic venous gas emboli on pulmonary gas exchange. Undersea Biomed Res 1978;5(1):41-42.

3. Neuman TS, Spragg R, Howard R, Moser K: Cardiopulmonary consequences of decompression stress. American Thoracic Society, May 1978, Boston, Massachusetts. Am Rev Resp Dis 1978;117(4):162.

4. Neuman T, Pruett R, Moser K: The relationship between heart rate and aerobic capacity in individuals engaged in underwater activities. Undersea Biomed Res 1979;6(Suppl):22.

PUBLICATIONS (continued):

Abstracts (continued)

5. Neuman T, Harrell J, Moser K: Biopsy of endobronchial lesions: Diagnostic yield from repetitive biopsies. Am Rev Resp Dis 1979;119(4)Part 2:155.

6. Neuman T, Moser K: Heart rate and exercise in individuals engaged in activities requiring specific ventilatory stress. Am Rev Resp Dis 1979;119(4)Part 2:155.

7. Neuman T, Moser K: Heart rate, oxygen consumption and minute ventilation in well-trained athletes. Am Rev Resp Dis 1979;119(4)Part 2:339.

8. Neuman T, Spragg RG, Wohl H: Platelet aggregates following decompression. Undersea Biomed Res 1981;8(1)Suppl:42.

9. Neuman TS, Bockman MA, Moody P, et al: An autopsy study of traumatic deaths: San Diego County - 1979. Southwestern Surgical Congress; April 26-29, 1982, pp 82-83.

10. Neuman TS, Bayne CG: Intermittent hyperbaric oxygen therapy for the treatment of barotraumatic cerebral air embolism. Undersea Biomed Res 1984;11(1)Suppl:41.

11. Neuman TS, Bove AA: Severe refractory type II decompression sickness resulting from combined non-decompression dives and pulmonary barotrauma. Presented at the Ninth International Symposium on Underwater and Hyperbaric Physiology, Kobe, Japan, September 1986, pp 62.

12. Powers AT, Neuman TS: Adjunctive use of HBO for clostridial myonecrosis in the newborn. Presented at the Ninth International Symposium on Underwater and Hyperbaric Physiology, Kobe, Japan, September 1986, pp 69-70.

13. Smith RM, Neuman TS: Evidence for coronary artery air embolism associated with cerebral air embolism in diving accidents. Undersea Biomed Res 1987;14(2)Suppl:17.

14. Neuman TS, Powers AT, Osborne DE: The prevalence of asthma, diabetes and epilepsy in a population of divers. Undersea Biomed Res 1988;15(Suppl):62-63.

15. Meyer FT, Guss DA, Neuman TS, Baxt WG, Dunford JV, Griffith LD, Guber SL: The impact of a regionalized trauma system on trauma care in San Diego County. Ann Emerg Med 1989; 18(4):474-475.

16. Jacoby I, Olson L, Neuman T: Pneumocardium: A roengenographic marker for overwhelming pulmonary overinflation syndrome. Poster session at the Joint Meeting on Diving and Hyberbaric Medicine, Amsterdam, The Netherlands, August 1990. Undersea Biomed Res 1990;17(Suppl):37.

17. Bove AA, Neuman T, Kelsen S, Gleason W: Observations on asthma in the recreational diving population. Undersea Biomed Res 1992;19(Suppl):18.

PUBLICATIONS (continued):

Abstracts (continued)

18. Powers AT, Bass B, Stewart J, Flahan M, Neuman TS: A six-year review of scuba diving fatalities in San Diego County. Undersea Biomed Res 1992;19(Suppl):20.

19. Neuman TS, Smith RM: Clinical nature of AGE I (hemoconcentration). Undersea Biomed Res 1992;19(Suppl):43-44.

20. Smith RM, Neuman TS: Clinical nature of AGE II (biochemical abnormalities). Undersea Biomed Res 1992;19(Suppl):44.

21. Neuman TS, Jacoby I, Olson L: Clinical nature of AGE III (radiographic features). Undersea Biomed Res 1992;19(Suppl):45.

22. Mosteller JA, Reich D, Harrington N, Rekow G, Jacobsen B, Powers A, Neuman T: A ten-year review of employee hyperbaric exposures. Undersea & Hyperbaric Med 1994;21(Suppl):18.

23. Neuman T, Jacoby I, Olson L: Fatal diving-related arterial gas embolism associated with complete filling of the central vascular bed. Undersea & Hyperbaric Med 1994;21(Suppl):95.

24. Bove AA, Neuman TS, Smith RM: ECG changes associated with pulmonary barotrauma. Undersea & Hyperbaric Med 1995;22(Suppl):55.

25. Harrell JH, Jacoby I, Neuman TS, Van Hoesen KB: Soft tissue and chondronecrosis of the trachea and bronchial tree, and the response to hyperbaric oxygen: A visual demonstration. Undersea & Hyperbaric Med 1996;23(Suppl):136.

26. Chan TC, Vilke GM, Neuman TS, Clausen JL: Does the hobble restraint position result in respiratory compromise? Acad Emerg Med 1997;4(5):459.

27. Neuman TS, Vilke GM, Chan TC, Clausen JL: Changes in pulmonary function associated with position. Undersea & Hyperbaric Med 1997;24(Suppl):13.

28. Vilke GM, Chan TC, Neuman T, Clausen JL: The effect of body position on pulmonary function. Acad Emerg Med 1998;5(5):397.

29. Snyder BK, Jackson-Friedman C, Neuman TS, Lyden PD: Effect of hyperbaric oxygen and indomethacin on neurologic outcome in a rat model of cerebral ischemia. Undersea & Hyperbaric Med 1999;26(Suppl):72.

30. Eisele JW, Chan T, Vilke G, Neuman T, Clausen J: Comparison of respiratory function in the prone maximal restraint position with and without additional weight force on the back. Proceedings of the American Academy of Forensic Sciences 2000;VI:202.

31. Chan TC, Vilke GM, Neuman T, Clark RF, Clausen J: Effect of oleoresin capsicum. Acad Emerg Med 2000;7(5):471.

PUBLICATIONS (continued):

Abstracts (continued)

32. Chan TC, Vilke GM, Neuman T, Clausen J, Schmidt P, Snowden T, Clark RF: Does oleoresin capsicum "pepper spray" exposure impact cardiovascular function in human subjects? Acad Emerg Med 2001;8(5):442.

33. Chan TC, Vilke GM, Clausen J, Clark R, Schmidt P, Snowden T, Neuman T: Impact of oleoresin capsicum spray on respiratory function in human subjects in the sitting and prone maximal restraint positions, 1998 (computer file). Inter-university Consortium for Political and Social Research (distributor); 2001.

WORKSHOPS, PROCEEDINGS AND POSITION STATEMENTS:

1. Neuman TS: Why restrict people who want to dive? In: "Fitness to Dive," the Proceedings of the 34th Undersea and Hyperbaric Medical Society Workshop, sponsored by NOAA; May 1986. Bethesda, Maryland: UHMS Publication Number 70(WS-FD); May 1987, pp 14-25.

2. Neuman TS: Pulmonary considerations I: Asthma; COPD; Need for special testing. In: "Fitness to Dive," the Proceeding of the 34th Undersea and Hyperbaric Medical Society Workshop, sponsored by NOAA, May 1986. Bethesda, Maryland: UHMS Publication Number 70(WS-FD); May 1987, pp 49-59.

3. Neuman TS, Bove AA: Severe refractory decompression sickness resulting from Combined non-decompression dives and pulmonary barotrauma: Type III decompression sickness. In: "Underwater and Hyperbaric Physiology IX", the Proceedings of the Ninth International Symposium on Underwater and Hyperbaric Physiology; Kobe, Japan, September 1986. Bethesda, Maryland: Undersea and Hyperbaric Medical Society; 1987, pp 985-991.

4. Powers AT, Jacoby I, Lynch FP, Coen RW, Neuman TS: Adjunctive use of HBO for clostridial myonecrosis in the newborn. In: "Underwater and Hyperbaric Physiology IX", the Proceedings of the Ninth International Symposium on Underwater and Hyperbaric Physiology; Kobe, Japan, September 1986. Bethesda, Maryland: Undersea and Hyperbaric Medical Society; 1987, pp 1087-1092.

5. Neuman TS: The role of helicopter aeroevacuation in the management of diving accident victims. In: "Advances in Underwater Science ... 88," the Proceedings of the American Academy of Underwater Sciences Eighth Annual Scientific Diving Symposium; MA Lang (Ed.). Costa Mesa, California: American Academy of Underwater Sciences; 1988, pp 113-116.

6. Neuman TS: United States Navy dive tables and no-stop diving. In the Proceedings of the American Academy of Underwater Sciences Dive Computer Workshop; MA Lang and RW Hamilton (Eds.). Sea Grant Publication Number USCSG-TR-01-89. Costa Mesa, California: American Academy of Underwater Sciences; 1989, pp 169-172.

WORKSHOPS, PROCEEDINGS AND POSITION STATEMENTS (continued):

7. Hyperbaric Oxygen Therapy. NHLBI Workshop Summary. Am Rev Respir Dis 144(6): 1414-1421; 1991.

8. Neuman TS: The Case for Allowing Asthmatics to Dive. Are Asthmatics Fit to Dive? Workshop. Undersea and Hyperbaric Medical Society Meeting, Palm Beach, Florida; June 1995.

9. Tactical Management of Diving Casualties in Special Operations. UHMS Workshop, Anchorage Alaska; April 30, 1996.

10. Dysbaric Osteonecrosis, Pulmonary Decompression Illness, Long Term Effects of Diving - Fitness to Dive Symposium, Cozumel, Mexico; June 17-18, 1997.

11. Potkin R, Alexander J, Neuman T: Asthma and Sport Diving. CTS Clinical Practice Assembly, California Thoracic Society, Medical Section of the American Lung Association of California; September 1997.

12. The Clinical Features of Pulmonary Barotrauma; Other Targets for Embolic Bubble Injury -- Pre-meeting Workshop, Undersea and Hyperbaric Medical Society Meeting, Boston, Massachusetts; June 1999.

13. "Individual Perspective", the Proceedings of Reverse Dive Profiles Workshop, Smithsonian Institution, Washington, DC; October 29-30, 1999. MA Lang and CE Lehner (Eds.), pp 270-272.

14. "Safe Passage: Astronaut Care for Exploration Missions", National Academy of Sciences, Institute of Medicine Executive Summary. JR Ball and CH Evans (Eds.); Washington, DC: National Academy Press; 2001.

15. Diagnosis of Decompression Sickness and Arterial Gas Embolism – Decompression Illness Workshop, Undersea and Hyperbaric Medical Society Meeting, La Jolla, California; June 26, 2002.

16. "Deep Decompression Stops and Their Effect Upon Doppler Ultrasonic Bubble Signals Following 210/50 and 170/30 Dives," Deep Stops and Modern Decompression Strategies Workshop, NAUI Worldwide, Technical Diving Operations; (Proceedings publication pending), Tampa, Florida; February 22-23, 2003.

17. The Diagnosis of Decompression Sickness and Arterial Gas Embolism, UHMS DCI Adjunctive Therapy Committee Workshop, Duke University; April 17-18, 2003 (Publication pending).

PRESENTATIONS AND SPEAKING ENGAGEMENTS:

1. Saturation Diving Systems – North Pacific Chapter, Undersea Medical Society, Santa Catalina, California; October 1974.

2. Physiologic Problems of Deep Diving – Western Industrial Health Conference, San Diego, California; October 1975.

3. Changes in Hematological and Hemorrheological Parameters Following Dives to 210 FSW and 132 FSW and Their Correlation with Bubble Score – Undersea Medical Society, Miami Beach, Florida; May 1976.

4. Drowning and Near Drowning – Aquatic Emergencies Seminar, County of San Diego Department of Public Health; August 1976.

5. Decompression Sickness – Grand Rounds, UCSD Medical Center; December 1976.

6. Emergency Treatment of Near Drowning and Diving Accidents – Postgraduate Institute for Emergency Physicians, Symposium III, UCSD Office of Continuing Education; August 1976, January 10-14, 1977, July 11-15, 1977, October 28, 1977, April 9, 1978, August 11, 1978, November 4, 1978, February 9, 1979.

7. Cardiopulmonary Complications Associated with Decompression – San Diego Division of the California Society of Cardiopulmonary Technologists; April 20, 1978.

8. The Effect of Decompression and Asymptomatic Venous Gas Emboli on Pulmonary Gas Exchange - Undersea Medical Society, Seattle, Washington; April-May 1978.

9. Cardiopulmonary Consequences of Decompression Stress – American Thoracic Society, Boston, Massachusetts; May 1978.

10. Physiologic Problem of Diving in Man – Physiologic Research Laboratory, Scripps Institute of Oceanography, La Jolla, California; May 30, 1978.

11. Drowning: Thermal Problems and the Effects of Increased Partial Pressure of Atmospheric Gases – American Occupational Health Association, Anaheim, California; April 30, 1979.

12. The Relationship Between Heart Rate and Aerobic Capacity in Individuals Engaged in Underwater Activities – Undersea Medical Society, Key Biscayne, Florida; May 1979.

13. Treatment of Decompression Sickness – Israeli Oceanographic Institute, Haifa, Israel; September 3, 1979.

14. Deep Ocean Diving, May 16, 1980 – Respiratory Manifestations of DCS, April 10, 1981; Topics in Respiration (Man and His Environment) with John B. West, M.D., UCSD School of Medicine, La Jolla, California.

15. Physiology of Decompression Sickness – Grand Rounds, UCSD Medical Center; March 11, 1981.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

16. Platelets Aggregates Following Decompression – Undersea Medical Society, Monterey, California; May 26-29, 1981.

17. Recognition and Management of Diving Casualties – Course Director (25 CME credits), UCSD School of Medicine, La Jolla, California; March 1981, October 1981, September 1982, October 1983.

18. An Autopsy Study of Traumatic Deaths: San Diego County, 1979 – Southwestern Surgical Congress, 34th Annual Meeting, San Diego, California; April 29, 1982.

19. Pathophysiology of Drowning – Kaiser Permanente Medical Group of Northern California, South San Francisco, California; July 13, 1983.

20. Neurologic Sequelae in Selected Cases of Scuba-related Injury – Neurology Grand Rounds, UCSD Medical Center; August 19, 1983.

21. Diving Medicine in Depth – Selected Topics: Emergency Medicine – Course Lecturer, Human Underwater Biology, Bonaire, Netherlands Antilles; April 14-22, 1984.

22. Current Indications for Hyperbaric Oxygen Therapy – Fallbrook Hospital, Fallbrook, California; May 17, 1984.

23. Diving Medicine – Annual Meeting of the American College of Sports Medicine, San Diego, California; May 23, 1984.

24. Intermittent Hyperbaric Oxygen Therapy for the Treatment of Barotraumatic Cerebral Air Embolism – Undersea Medical Society, San Antonio, Texas; May 29-June 2, 1984.

25. Marine and Aquatic Sports Medicine – Course Lecturer, University of California, Davis, Monterey, California; June 24-27, 1984.

26. Hyperbaric Medicine – Fact and Fiction – Pomerado Hospital, San Diego, California; August 10, 1984.

27. Hyperbaric Oxygen Therapy – Villa View Community Hospital, San Diego, California; October 18, 1984.

28. Carbon Monoxide Poisoning Complicated by Near Drowning – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; October 26, 1984.

29. Medicine in the Aquatic Environment – Principal Lecturer, Cairns, Australia; November 2-17, 1984.

30. Near Drowning – Medical Chest Conference, UCSD School of Medicine; March 21, 1985.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

31. Diving Medicine in Depth – Selected Topics: Emergency Medicine – Course Lecturer, Human Underwater Biology, Bonaire, Netherlands Antilles; April 1-7, 1985.

32. Syncope at 30 Feet – A Case of Carbon Monoxide Poisoning – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; May 3, 1985.

33. Diving Medicine in Depth: Introduction to Diving Medicine – Course Lecturer, Human Underwater Biology, Grand Cayman Island; July 7-13, 1985.

34. Hyperbaric Therapy: Fact and Fancy – Advances in Internal Medicine Postgraduate Course, Department of Medicine, UCSD Medical Center; September 2, 1985.

35. Arterial Gas Embolism – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; January 17, 1986.

36. Hyperbaric Medicine in Current Medical Practice – Annual Meeting of the Oregon Physicians Ski Association, Sun River, Oregon; February 20, 1986.

37. Diving Medicine in Depth – Selected Topics: Special Problems – Course Lecturer, Human Underwater Biology, Bonaire, Netherlands Antilles; March 22-29, 1986.

38. Diving Safety – Presentation to the San Diego County Sheriff's Special Enforcement Detail, San Diego, California; June 11, 1986.

39. Introduction to Diving Medicine – Presentation to the Medical Department of the California Institution for Men, Chino, California; July 3, 1986.

40. Diving Medicine in Depth – Selected Topics: Special Problems – Course Lecturer, Human Underwater Biology, Grand Cayman Island; July 12-19, 1986.

41. Severe Refractory Type II Decompression Sickness Resulting from Combined "No Decompression" Dives and Pulmonary Barotrauma – Ninth International Symposium on Underwater and Hyperbaric Physiology, Kobe, Japan; September 20, 1986.

42. Symptoms and Treatment of Arterial Gas Embolism and Decompression Sickness – U.S. Coast Guard Air Station, San Diego, California; September 25, 1986.

43. Hyperbaric Oxygen Therapy and Osteoradionecrosis – Grand Rounds, Division of Head and Neck Surgery, Veterans Affairs Medical Center, La Jolla, California; January 9, 1987.

44. Drowning – Medical Chest Conference, Division of Pulmonary and Critical Care Medicine, UCSD Medical Center; January 22, 1987.

45. Interpretation of Arterial Blood Gases—Emergency Medicine Lecture Series, Veterans Affairs Medical Center and UCSD Medical Center; July 28 & 31, 1987.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

46. Evaluation of the Patient in Respiratory Distress and the Interpretation of the Arterial Blood Gases – Family Medicine Grand Rounds, UCSD Medical Center; August 6, 1987.

47. Drowning – Sharp Rees-Stealy Medical Group, San Diego, California; September 4, 1987.

48. Hyperbaric Oxygenation: Current Status – Medical Chest Conference, Division of Pulmonary and Critical Care Medicine, UCSD Medical Center; October 22, 1987.

49. Hyperbaric Medicine – School of Medicine Associates, UCSD School of Medicine; November 18, 1987.

50. Guest Lecturer, Underwater Medicine 1988, sponsored by Temple University School of Medicine, held at Cayman Brac; January 23-29, 1988.

51. Summit to Submarine - Baromedicine from Altitude Sickness to the "Bends" and "Drowning" – California Medical Association Western Scientific Assembly, Reno, Nevada; March 5, 1988.

52. Medical Evaluation of Scuba Divers – Student Health Services, San Diego State University; April 21, 1988.

53. Clinical Hyperbaric Medicine Course – Principal Lecturer, Alvarado Medical Center, San Diego, California; April 23-24, 1988.

54. Decompression Sickness and Arterial Gas Embolism – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; April 28, 1988.

55. Current Indications for Hyperbaric Oxygen Therapy – Grand Rounds, Children's Hospital and Medical Center, San Diego, California; April 29, 1988.

56. The Prevalence of Asthma, Diabetes and Epilepsy in a Population of Divers – Undersea and Hyperbaric Medical Society, New Orleans, Louisiana; June 6-10, 1988.

57. Diving Medicine – Sports Medicine 1988: A Practical Approach to Caring for Today's Athlete, San Diego, California; July 29, 1988.

58. Near Drowning and Diving Medicine: Case Presentations – Fourth Annual Wilderness Medicine Conference, Snowmass, Colorado; August 14-15, 1988.

59. USN Dive Tables – American Association of Underwater Scientists Workshop, USC Marine Science Center, Catalina, California; September 27, 1988.

60. Diving Accidents – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; October 28, 1988.

61. Computer-Assisted Diving – Banquet Speaker, The Hazards of Diving in Polluted Water, University of Maryland Sea Grant, Bethesda, Maryland; December 13-16, 1988.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

62. Guest Lecturer, Underwater Medicine 1989, sponsored by Temple University, held at Virgin Gorda, British Virgin Islands; January 14-21, 1989.

63. Carbon Monoxide Poisoning – Grand Rounds, Department of Medicine, UCSD Medical Center; February 15, 1989.

64. Carbon Monoxide Poisoning – Morbidity and Mortality Conference, Children's Hospital and Health Center, San Diego, California; April 18, 1989.

65. Hyperbaric Oxygen Therapy for Osteoradionecrosis of the Mandible – Advanced Oral and Maxillofacial Surgery Course, Naval Dental Clinic, San Diego, California; May 8-10, 1989.

66. Pulmonary Problems – Fit to Dive, Pre-meeting Course of the Undersea and Hyperbaric Medical Society, Honolulu, Hawaii; June 6, 1989.

67. Near Drowning and Diving Medicine – Marine Medicine 1989, UCSD Office of Continuing Medical Education, San Diego, California; July 10-14, 1989.

68. Interpretation of Arterial Blood Gases – Emergency Medicine Lecture Series, VA Medical Center and UCSD Medical Center; July 18 & 26, 1989.

69. Diving Medicine in Depth – Selected Topics: Special Problems – Course Lecturer, Human Underwater Biology, Cayman Brac; July 30-August 4, 1989.

70. Pressure Related Illness from the Sea to Summit – Fifth Annual Wilderness Medicine Conference, Snowmass, Colorado; August 13, 1989.

71. Diving Medicine – Fifth Annual Wilderness Medicine Conference, Snowmass, Colorado; August 14, 1989.

72. Asthma and Diving – Pulmonary Fitness for Diving – 1990 Joint Annual Conference of the Undersea and Hyperbaric Medical Society's Gulf Coast Chapter, the Undersea and Hyperbaric Medical Society Associates, and the Baromedical Nurses Association, Birmingham, Alabama; April 26, 1990.

73. Hyperbaric Oxygen and Head & Neck Surgery – ENT Grand Rounds, UCSD Medical Center; May 10, 1990.

74. Osteoradionecrosis and Hyperbaric Oxygen – Advanced Oral and Maxillofacial Surgery, Department of the Navy, San Diego, California; May 16, 1990.

75. Marine Bites and Stings – Wound Management Workshop for Nonsurgeons, UCSD Medical Center; May 18, 1990.

76. Near Drowning – Marine Medicine 1990, UCSD Office of Continuing Education, San Diego, California; July 9, 1990.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

77. Diving Medicine: An Overview – Marine Medicine 1990, UCSD Office of Continuing Education, San Diego, California; July 10, 1990.

78. Where Do Standard Tables (Navy) Come From and How Safe Are They? – Marine Medicine 1990, UCSD Office of Continuing Education, San Diego, California; July 11, 1990.

79. Workshop on Advanced Diving Medicine: Decompression Tables (Moderator) – Marine Medicine 1990, UCSD Office of Continuing Education, San Diego, California; July 11, 1990.

80. Diving Medicine in Depth – Selected Topics: Fitness to Dive – Course Lecturer, Human Underwater Biology, Fiji; October 9-20, 1990.

81. Treatment of Carbon Monoxide Poisoning – Department of Emergency Medicine, Naval Hospital, San Diego, California; December 6, 1990.

82. Course Lecturer, Underwater Medicine 1991, sponsored by Temple University, held at Bonaire, Netherlands Antilles; January 13-18, 1991.

83. Carbon Monoxide Poisoning – Management and Mortality Conference, Department of Medicine, UCSD Medical Center; March 1, 1991.

84. Diving Accidents – Ambulatory Care Conference, Department of Medicine, UCSD Medical Center; March 5, 1991.

85. Diving Medicine – Grand Rounds, Division of Family Medicine, UCSD Medical Center; April 17, 1991.

86. HBO Therapy and its Role in the Management of Necrotizing Soft Tissue Infections – Trauma Conference, Department of Surgery, UCSD Medical Center; April 23, 1991.

87. Hyperbaric Medicine – Wednesday Morning Lecture Series, Sharp Memorial Hospital; May 22, 1991.

88. Diving and Decompression – Introductory Pulmonary Clinical Course, Pulmonary and Critical Care Division, UCSD Medical Center; July 3, 1991.

89. Drowning – Grand Rounds, Department of Surgery, UCSD Medical Center; August 3, 1991.

90. Clinical Nature of AGE I (hemoconcentration); Clinical Nature of AGE II (biochemical abnormalities); and Clinical Nature of AGE III (radiographic features) – Annual Conference of the Undersea and Hyperbaric Medical Society, Bethesda, Maryland; June 25, 1992.

91. Diving Medicine – Marine Medicine 1992, UCSD Office of Continuing Education, San Diego, California; July 16, 1992.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

92. Neurologic Consequences of Diving Accidents – Grand Rounds, Department of Neurology, UCSD Medical Center; November 6, 1992.

93. Indications For and Use of Hyperbaric Oxygen Therapy – Department of Medicine Noon Conference, Veterans Affairs Medical Center, La Jolla, California; December 7-8, 1992.

94. Drowning and Diving Medicine – Palomar College; December 9, 1992.

95. Diving Physics; Decompression Tables and Computers; Pathophysiology and Treatment of AGE; Diagnosis and Management of Decompression Sickness; Multiplace and Monoplace Chambers – Underwater Medicine 1993, sponsored by Temple University, held at Bay Islands, Honduras; January 17-24, 1993.

96. Near Drowning; Pathophysiology and Treatment of Decompression Sickness; Asthma and Diving; History of Navy Tables and Their Safety; Computerized Diving – 22nd Diving Accident and Hyperbaric Medicine Course, Divers Alert Network, Duke University, held at Cozumel, Mexico; April 24 - May 1, 1993.

97. Hyperbaric Oxygen Therapy – Department of Medicine Noon Conference, Veterans Affairs Medical Center and UCSD Medical Center; September 13, 1993 and September 21, 1993.

98. Lies, Damn Lies and Diving Medicine – Diver's Day, sponsored by Hyperbaric Oxygen Treatment Center at Saint Joseph Health Center and The Lee's Summit Underwater Recovery Unit, Kansas City, Missouri; October 9, 1993.

99. Diving Associated Arterial Gas Embolism – Pulmonary and Critical Care Grand Rounds, UCSD Medical Center; February 17, 1994.

100. Diving Medicine; Carbon Monoxide Poisoning; Near Drowning; Hyperbaric Medicine – 14th Annual Colorado Symposium on Emergency Care, Durango, Colorado; April 22-24, 1994.

101. Diving Medicine; Near Drowning – Wilderness Medicine Conference, Snowmass, Colorado; August 18-19, 1994.

102. Near Drowning; U.S. Navy Tables Pathophysiology and Treatment of AGE; Computerized Diving; Asthma and Diving – 25th Diving Accident and Hyperbaric Medicine Course, Divers Alert Network, Duke University, held at Peter Island, British Virgin Islands; October 1-8, 1994.

103. Arterial Air Embolism; Asthma and Diving; Decompression Safety; Diving Accident Analysis – Underwater Medicine 1995, sponsored by Temple University, held at St. Lucia, West Indies; January 14-21, 1995.

104. Asthma and Diving; "Are Asthmatics Fit to Dive" Pre-meeting Symposium, Undersea and Hyperbaric Medical Society, West Palm Beach, Florida; June 21, 1995.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

105. Diving Medicine; Keynote Speaker at Century Hospital Staff and Faculty Retreat, La Costa, California; July 15, 1995.

106. Neurologic Aspects of Dysbarism – Grand Rounds, Department of Neurosciences, UCSD Medical Center, San Diego, California; September 15, 1995.

107. Barotrauma; Arterial Air Embolism; Diving with Asthma; Decompression Safety; Near Drowning – Underwater Medicine 1996, sponsored by Temple University, held at Little Cayman Island; January 14-19, 1996.

108. Arterial Air Embolism; Technical Diving; Near Drowning; Diving with Asthma – Diving Medicine Course, Divers Alert Network, Duke University, held at Moorea, French Polynesia; September 29-October 6, 1996.

109. Advances in Treatment and Understanding Arterial Gas Embolism – Explosive Ordinance Disposal Group, Diving Medicine Symposium, Coronado, California; November 21, 1996.

110. Arterial Gas Embolism; Diving Safety; Diving and Asthma – Underwater Medicine 1997, sponsored by Temple University, held at Cozumel, Mexico; January 12-18, 1997.

111. The Care of the Critically Ill in a Hyperbaric Chamber, Carbon Monoxide Poisoning, Arterial Gas Embolism – IX International Symbolism of Critical Care Medicine, SOPATI Sao Paulo, Brazil; June 6-8, 1997.

112. Diving Medicine; Near Drowning – Wilderness Medicine Conference, Snowmass, Colorado; August 17-18, 1997.

113. Near Drowning – Grand Rounds, Department of Emergency Medicine, UCSD Medical Center, San Diego, California; November 11, 1997.

114. Oxygen Toxicity – Keynote Speaker at Great Lakes Chapter, Undersea and Hyperbaric Medical Society Meeting, Hamilton, Canada; November 15, 1997.

115. Review of Arterial Gas Embolism – Naval Environmental Health Conference, San Diego, California; March 27, 1998.

116. Pulmonary Barotrauma and Arterial Gas Embolism – Institute for Marine Medicine, Simon's Town, Republic of South Africa; July 23, 1998.

117. Drowning and Breathhold Diving; Pathophysiology and Treatment of AGE and DCI; Potential Long Term Effects, Neurological, Aseptic Necrosis, etc; Computers and Diving, Pathophysiology and Treatment with HBO – Diving Medicine Course, Divers Alert Network, Duke University, held at Cozumel, Mexico; October 4-9, 1998.

118. Hyperbaric Oxygen Therapy -- Grand Rounds, Northridge Hospital, Northridge, California; January 15, 1999.

PRESENTATIONS AND SPEAKING ENGAGEMENTS (continued):

119. Barotrauma; Diving with Asthma; Decompression Safety -- Underwater Medicine 1999, sponsored by Temple University, held at Little Cayman Island; January 17-22, 1999.

120. Moderator, Session on Health Effects of Diving, Undersea and Hyperbaric Medical Society Meeting, Boston, Massachusetts; June 1999.

121. Non-Pulmonary Barotrauma, Pulmonary Barotrauma, Diving and Asthma, Near Drowning -- Underwater Medicine 2000, sponsored by Temple University, held at Peter Island, British Virgin Islands; January 15-22, 2000.

122. Near Drowning -- Grand Rounds, Department of Emergency Medicine, UCSD Medical Center, San Diego, California; March 13, 2001.

123. Diving Medicine; Near Drowning -- Wilderness Medicine Conference, Keystone, Colorado; July 7-8, 2001.

124. Treatment of Decompression Illness, Non-Pulmonary Barotrauma, Pulmonary Barotrauma, Diving and Asthma, Near Drowning, Diving Tables and Computers -- Underwater Medicine 2002, sponsored by Temple University, held at Curacao, Netherland Antilles; January 12-19, 2002.

125. Drowning and Near Drowning, Topics and Advances in Internal Medicine, UCSD School of Medicine, San Diego, California; March 2, 2002.

126. Near Drowning, Sudden Death; Breath Hold Diving, Pathophysiology and Treatment of Arterial Gas Embolism, Fitness to Dive: DAN, 44th Diving and Hyperbaric Medicine Course, Turks & Caicos, B.W.I.; April 21-23, 2002.

127. Arterial Gas Embolism, The Diagnosis of Decompression Sickness and AGE, Naval Experimental Diving Unit, Panama City, Florida; October 17, 2002.

128. "Deep Decompression Stops and Their Effect Upon Doppler Ultrasonic Bubble Signals Following 210/50 and 170/30 Dives," Deep Stops and Modern Decompression Strategies Workshop, NAUI Worldwide, Technical Diving Operations, Tampa Florida; February 22-23, 2003.

129. The Diagnosis of Decompression Sickness and Arterial Gas Embolism, Duke University; April 17, 2003.

130. Arterial Gas Embolism, The Diagnosis of Decompression Sickness and AGE, Naval Experimental Diving Unit, Panama City, Florida; April 24, 2003.